PATENT COOPERATION TREATY

From the INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Fa:

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NOTIFICATION OF THANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(PCT Rule 71.1)

Date of mailing

(dsymonth/ear)

01.03.2006

Applicantis or agents the reterence

WO 21.1189

WL-FE

IMPORTANT NOTIFICATION

International application No. PCT/EP2005/001436

International filing data (daymonth/year)

08.02.2008

Priority date (daymooth(year) 18.03.2004

Applicant

SERVICES PETROLIERS SCHLUMBERGER et al.

- The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
- A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
- Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority data (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/8/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guids.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:



European Patent Office - P.S. 5915 Patentiaen 2 Rt. 2290 HV Pilewijk - Pays Ses Tel: +31 70 340 - 2040 Tx; S1 661 apo ni Pax: +31 70 340 - 3016 Authorized Officer

Ter Haar, H

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PATENT COOPERATION TREATY

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter If of the Petent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No. PCT/EP2005/001436

Sox No. I Basis of the report With regard to the language, this report is based on the international application in the language in which filed, unless otherwise inclinated under this item. This report is based on translations from the original language into the following language , which is the language of a translation turnished for the purposes of: C international search (under Rules 12.3 and 23.1(b)) D publication of the international application (under Rule 12.4) C international preliminary examination (under Rules 55.2 ander 55.3) With regard to the elements' of the international application, this report is based on (replacement sheets have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in the port as "originally filed" and are not annexed to this report). Description, Pages 1-11 as originally filed Claims, Numbers 1-21 filed with telefax on 18.01.2008 Drawings, Sheets 17-77 ax originally filed Claims, Numbers 1-21 filed with telefax on 18.01.2008 Drawings, Sheets 17-77 ax originally filed Claims, Numbers 1-21 filed with telefax on 18.01.2008 Drawings, Sheets 17-77 ax originally filed Claims, Nos. C) the drawings, sheetsfiles C) the sequence listing (specify): C) any table(s) related to sequence listing (specify): C) the description, pages C) the drawings, sheetsfiles C) the description, pages C) the description and contents of the page of the contents of the pa	www					
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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No. PCT/EP2005/001436

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Yes: Claims

1-21

No:

Inventive step (IS)

Yes: Claims

Claims

1-21

No: Claims

Industrial applicability (IA)

Yest Claims

1-23

No: Claims

2. Citations and explanations (Fule 70.7):

see separate sheet

Reltem V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- 1 Heference is made to the following documents:
 - D1: WO 02/101194 A (MAUTE ROBERT; REM SCIENT ENTPR INC (US)) 19
 December 2002 (2002-12-19)
 - D2: US 5 631 562 A (CRAM MILTON E ET AL) 20 May 1997 (1997-05-20)
 - D3: US 4 862 090 A (VANNIER DANIEL ET AL) 29 August 1989 (1989-08-29).
- 2 The document D1 is regarded as being the closest prior art to the subject-matter of independent claim 1, and shows:

A borehole logging tool comprising a sensor loop. The sensor loop includes a series of contiguous sensors that act as electromagnetic flowmeters and provide fluid measurements covering the entire circumference of the sensor loop. The sensor loop includes an elastic element that forces the sensor loop outward to maintain pressure along the sensor loop circumference against the interior borehole wall. The sensor loop is designed to lie at a non-perpendicular angle to the wellbore axis, and mechanical arms press the top and bottom of the loop against the borehole inner wall (see also figures 3 and 3a of D1).

The subject-matter of claim 1 differs from this known logging tool in that the claimed logging tool comprises:

pads that are pivotable about a radial axis relative to the tool body, and the pads are
alongate pads adjacently arranged to provide different circumferential coverage
according to the orientation with respect to the longitudinal axis of the borehole.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

- 2.1 The problem to be solved by the present invention may be regarded as: providing constant total circumferential coverage with a logging tool having pads in boreholes with different diameters and shapes.
- 2.2 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: by allowing the pads to rotate about a radial axis relative to the tool body, the orientation of the pads can be changed to adjust the actual amount of circumferential coverage by the pads and so accommodate different borehole diameters and shapes while providing the same degree of circumferential coverage (see paragraph [0006] of the application as originally filed).
- 2.3 Claims 2-19 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.
- 2.4 Since the subject-matter of independent claims 20 and 21 corresponds to the subject matter of claim 1, the same reasoning as given for claim 1 will apply mutatis mutandis. Therefore claims 20 and 21 also meet the requirements of the PCT in respect of novelty and inventive step (Article 33(2) and (3) PCT).